

EXHIBIT 21

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**

IN RE NATIONAL PRESCRIPTION OPIATE LITIGATION

This document relates to:

MDL No. 2804

*The County of Summit, Ohio, et al. v. Purdue
Pharma L.P., et al., Case No. 18-op-45090*

Hon. Dan Aaron Polster

*The County of Cuyahoga, Ohio, et al. v. Purdue
Pharma L.P., et al.*, Case No. 17-op-45004

Expert Report of Heath A. Jolliff, D.O.
May 10, 2019

1. Dr. Keyes's recommendation for the use of fentanyl test strips as part of treatment at hospitals and emergency department does not take into account several factors.
 - a. First, contamination of the heroin available in Ohio with fentanyl is so widespread that there is limited need for testing to guide a patient's treatment or his subsequent behavior. Informal analyses of data from the Ohio Bureau of Criminal Investigation indicate that in 2017 nearly 50% of confiscated heroin contained a synthetic opioid (e.g. fentanyl, carfentanil) and in 2018 that number rose to nearly 70%. ^{79, 80} In short, users of heroin in Ohio and the doctors who treat them expect that they are being regularly exposed to fentanyl. In my practice as an emergency medicine physician, I counsel my patients with OUD accordingly. The presence of fentanyl testing would not change this behavior.
 - b. Second, it is exceptionally rare that a patient's drug supply is available for testing at a medical facility. Patients with OUD or SUD are unlikely to give their drugs to an authority that will confiscate them. In addition, other individuals present at the time of the patient's injury may either steal or dispose of the relevant substance long before the patient reaches the hospital.
 - c. Third, there are significant legal restrictions on the permissibility of "bedside tests" like fentanyl test strips in hospitals under the

E. The problem of addiction continues despite declining opioid prescriptions and use. Over the last few years, people are dying from heroin, fentanyl and non-opioid drugs like cocaine and methamphetamine in record numbers.^{71,72}

Without a focus on the problem of addiction itself and these non-opioid drugs, the rates of overdose and death will continue to increase.

F. As recent studies have shown, addiction is a complex problem with no single, simple solution. Focusing only on decreasing the number of opioid prescriptions will only address a small portion of the problem.^{74,77,78}

Sincerely,

A handwritten signature in black ink, appearing to read "Heath A. Jolliff".

Heath A. Jolliff, DO, FACEP, FAAEM, FACMT